

15 July 2021

Kit Components

Product Code	Description
43036-1, 43036-2, 4303618-3	BigEasy™ v2.0 Linear Cloning Kit (pJAZZ™-OK Blunt Vector)

Components

pJAZZ-OK Blunt Vector	F92548-1, F92548-2
CloneSmart DNA Ligase	F93188-1
CloneDirect 10X Ligation Buffer	F98185-5
Positive Control Insert DNA Lambda	F92368-1
Pmei, Smal	
Sequencing Primer SL1	F91108-1
Sequencing Primer NZ-RevC	F91433-1



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 10/19/2021 Version: B

SECTION 1: Identification of the substance/mixture and of the company/undertaking

: Laboratory Chemicals.

1.1. Product identifier

Product name	:	pJAZZ™-OK Blunt Vector.
Product form	:	Mixture
Product code	:	F92548-1, F92548-2

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

1.3. Details of the supplier of the safety data sheet

Lucigen Corp. Legal entity of LGC, Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

1.4. Emergency telephone number

Emergency number

: 1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not a hazardous substance or mixture.

2.2. Label elements

GHS-US labelling

Not a hazardous substance or mixture.

2.3. Other hazards

No additional information available.

2.4. Unknown acute toxicity (GHS-US)

No data available.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Non-hazardous mixture

SECTION 4: First aid measures

4.1. Description of first aid measures				
First-aid measures general	 If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person. 			
First-aid measures after inhalation	: IF INHALED: Remove to fresh air and keep at rest in a comfortable position for breathing. If not breathing, give artificial respiration. Consult a physician.			
First-aid measures after skin contact	: IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with tepid water for at least 15 minutes. If symptoms continue, consult a physician.			
First-aid measures after eye contact	: IF IN EYES: Immediately flush with tepid water for at least 15 minutes. Remove contact lenses if present and can easy to do so. Continue rinsing. If symptoms continue, consult a physician.			
First-aid measures after ingestion	: IF SWALLOWED: Rinse mouth thoroughly. Do not induce vomiting. Consult a physician if symptoms persist. Do not give anything by mouth to an unconscious person.			
4.2. Most important symptoms and effects, both acute and delayed				
Symptoms/injuries	: Not expected to present a significant acute hazard under anticipated conditions of normal use.			
Symptoms/injuries after inhalation	: May cause upper respiratory irratation.			
Symptoms/injuries after skin contact	: May cause skin irritation.			





Symptoms/injuries after eye contact	: Direct contact with the eyes is likely to be irritating.
Symptoms/injuries after ingestion	: May cause gastrointestinal irritation.
, , , , ,	edical attention and special treatment needed
No additional information available.	suica alleniion anu special ileaiment needeu
SECTION 5: Firefighting measur	es
5.1. Extinguishing media	
Suitable extinguishing media	: Incase of fire, use water, dry chemical, chemical foam, or alcohol-resistance foam. Use agents most appropriate to extinguish the fire.
5.2. Special hazards arising from th	e substance or mixture
Fire hazard	: Product is not flammable.
Explosion hazard	: Product is not explosive.
Reactivity	: No dangerous reactions known under normal conditions of use.
5.3. Advice for firefighters	
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. In the event of fire and/or explosion, do not breathe fumes. Do not dispose of fire fighting water in the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release	neasures
6.1. Personal precautions, protectiv	ve equipment and emergency procedures
General measures	: Ventilate area. Evacuate area. Keep upwind. Spill should be handled by trained clean-up crew properly equipped with respiratory equipment and full chemical protective gear (see Section 8)
6.1.1. For non-emergency personnel	
Protective equipment	: Wear Protective equipment as described in Section 8.
6.1.2. For emergency responders	
6.1.2. For emergency responders Protective equipment	: Wear suitable protective clothing, gloves and eye or face protection. For further information refer to section 8: "Exposure controls/personal protection".
Protective equipment 6.2. Environmental precautions	
Protective equipment 6.2. Environmental precautions	refer to section 8: "Exposure controls/personal protection". Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.
Protective equipment6.2. Environmental precautionsPrevent entry to sewers and public waters.	refer to section 8: "Exposure controls/personal protection". Notify authorities if liquid enters sewers or public waters. Avoid release to the environment. inment and cleaning up
 Protective equipment 6.2. Environmental precautions Prevent entry to sewers and public waters. 6.3. Methods and material for contact 	refer to section 8: "Exposure controls/personal protection". Notify authorities if liquid enters sewers or public waters. Avoid release to the environment. inment and cleaning up : Contain any spills with dikes or inert absorbents (e.g., sand or vermiculite) to prevent migration
 Protective equipment 6.2. Environmental precautions Prevent entry to sewers and public waters. 6.3. Methods and material for conta For containment 	refer to section 8: "Exposure controls/personal protection". Notify authorities if liquid enters sewers or public waters. Avoid release to the environment. inment and cleaning up : Contain any spills with dikes or inert absorbents (e.g., sand or vermiculite) to prevent migration and entry into sewers or streams. : Soak up spills with inert absorbants, such as vermiculite and sand. This material and its
 Protective equipment 6.2. Environmental precautions Prevent entry to sewers and public waters. 6.3. Methods and material for containment For containment Methods for cleaning up 	refer to section 8: "Exposure controls/personal protection". Notify authorities if liquid enters sewers or public waters. Avoid release to the environment. inment and cleaning up : Contain any spills with dikes or inert absorbents (e.g., sand or vermiculite) to prevent migration and entry into sewers or streams. : Soak up spills with inert absorbants, such as vermiculite and sand. This material and its
 Protective equipment 6.2. Environmental precautions Prevent entry to sewers and public waters. 6.3. Methods and material for containment For containment Methods for cleaning up 6.4. Reference to other sections 	 refer to section 8: "Exposure controls/personal protection". Notify authorities if liquid enters sewers or public waters. Avoid release to the environment. inment and cleaning up Contain any spills with dikes or inert absorbents (e.g., sand or vermiculite) to prevent migration and entry into sewers or streams. Soak up spills with inert absorbants, such as vermiculite and sand. This material and its container must be disposed of in a safe way, and as per local, state, and federal legislation.
Protective equipment 6.2. Environmental precautions Prevent entry to sewers and public waters. 6.3. Methods and material for conta For containment Methods for cleaning up 6.4. Reference to other sections No additional information available	 refer to section 8: "Exposure controls/personal protection". Notify authorities if liquid enters sewers or public waters. Avoid release to the environment. inment and cleaning up Contain any spills with dikes or inert absorbents (e.g., sand or vermiculite) to prevent migration and entry into sewers or streams. Soak up spills with inert absorbants, such as vermiculite and sand. This material and its container must be disposed of in a safe way, and as per local, state, and federal legislation.

Storage conditions

 $\div\,$ Store in at either -20°C or -70°C . Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

8.1. **Control parameters**

Components with workplace control parameters

Contains no substances with occupational exposure limit values.



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8.2. Exposure controls

Appropriate engineering controls	: Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ensure adequate ventilation, especially in confined areas. Emergency safety shower and eye wash should be available.
Personal protective equipment	: Gloves. Protective goggles.
Hand protection	: Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suitable gloves for this specific application can be recommended by the glove supplier.
Eye protection	: Use eye protection suitable to the environment. Avoid direct contact with eyes.
Skin and body protection	: Wear long sleeves, and chemically impervious PPE to minimize bodily exposure.
Respiratory protection	: Use NIOSH-approved dust/particulate respirator as needed. Where vapor, mist, or dust exceed

PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties					
Physical state	: Liquid containing dissolved material				
Color	: Colorless				
Odor	: No data available				
Odor Threshold	: No data available				
рН	: ~7				
Melting point	: No data available				
Freezing point	: No data available				
Boiling point	: No data available				
Flash point	: No data available				
Relative evaporation rate	: No data available				
Flammability (solid, gas)	: No data available				
Vapour pressure	: No data available				
Relative vapour density at 20 °C	: No data available				
Relative density	: No data available				
Solubility	: No data available				
Log Pow	: No data available				
Log Kow	: No data available				
Auto-ignition temperature	: No data available				
Decomposition temperature	: No data available				
Viscosity, kinematic	: No data available				
Viscosity, dynamic	: No data available				
Explosive properties	: No data available				
Oxidising properties	: No data available				
Explosive limits	: No data available				
9.2. Other information					

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

None known.



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10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not available
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity	 Not available Not available Not available Not available Not available Not available
Reproductive toxicity Specific target organ toxicity (single exposure)	: Not available : Not available
Specific target organ toxicity (repeated exposure)	: Not available
Aspiration hazard Symptoms/injuries after inhalation Symptoms/injuries after skin contact Symptoms/injuries after eye contact Symptoms/injuries after ingestion	 Not classified May cause upper respiratory irratation. May cause skin irritation. Direct contact with the eyes is likely to be irritating. May cause gastrointestinal irritation.

SECT	ION 12: Ecological informa	tion	
12.1.	Toxicity		
No add	litional information available.		
12.2.	Persistence and degradability		
No add	litional information available.		
12.3.	Bioaccumulative potential		
No add	litional information available.		
12.4.	Mobility in soil		
No add	litional information available.		
12.5.	Other adverse effects		
No add	litional information available.		
SECT	ION 13: Disposal considera	tion	S
13.1.	Waste treatment methods		
Waste	treatment methods		Obtain the consent of pollution control authorities before discharging to wastewater treatment plants. Product should not be discharged to surface waters without a NPDES permit.
Waste	disposal recommendations		Dispose in a safe manner in accordance with local, state, and federal regulations. Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

Not hazardous for transport

Additional information Other information

: No supplementary information available.

Transport by sea

No additional information available

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Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

SARA 304 Extremely Hazardous Substances Reportable Quantity

This product does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

No SARA Hazards

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.2. International regulations

No additional information available.

15.3. US State regulations

California Proposition 65

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

This mixture not listed on the following:
U.S Massachusetts - Right To Know List
U.S New Jersey - Right to Know Hazardous Substance List
IIS Depreviewing DTK (Pight to Know) List

U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information	
Indication of changes	: Revision B: Update branding.
Revision date	: 10/19/2021
Otherinformation	: Author: Biosearch Technologies.
NFPA health hazard	: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	: 0 - Materials that will not burn.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.
HMIS III Rating	
Health	: 0
Flammahility	. 0

Flammability	: 0
Physical	: 0
Personal Protection	:

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with applicable regional, national and local laws and regulations.



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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	: CloneSmart™ DNA Ligase
Product form	: Mixture
Product code	: F93188-1, F93188-2, F93188-4

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

: Laboratory chemical.

1.3. Details of the supplier of the safety data sheet

Lucigen Corp. Legal entity of LGC, Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

1.4. Emergency telephone number

Emergencynumber

: 1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified.

2.2. Label elements

GHS-US labelling

No labeling applicable.

2.3. Other hazards

None.

2.4. Unknown acute toxicity (GHS-US)

No data available.

SECTION 3: Composition/information on ingredients

3.2. Mixture

Name	Product identifier	%
Glycerol, CAS # 56-81-5 EC# 200-289-5 Chemical Formula: $C_3H_8O_3$ Molecular Weight: 92.09 g/mol Synonyms: 1,2,3-Propanetriol, Glycerin	Ingredient in product.	50%

SECTION 4: First aid measures

4.1. Description of first aid measures	
First-aid measures general	: If exposed or concerned, consult a physician. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
First-aid measures after inhalation	: IF INHALED: Remove to fresh air and keep at rest in a comfortable position for breathing. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin for at least 15 minutes with tepid water. Consult a physician.
First-aid measures after eye contact	: IF IN EYES: Immediately flush with plenty of tepid water for at least 15 minutes. Remove contact lenses if present and easy to do so. Continue rinsing. Consult a physician.
First-aid measures after ingestion	: IF SWALLOWED: Rinse mouth thoroughly and consult a physician. Do not induce vomiting.



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d effects, both acute and delayed
: Not expected to present a significant acute hazard under anticipated conditions of normal use.
: May cause upper respiratory irratation.
: Direct contact will cause skin irritation.
: Direct contact will cause eye irritation.
: Will cause gastrointestinal irritation.
nedical attention and special treatment needed

OLOH	on of the menghang measures	
5.1.	Extinguishing media	
Suitable	extinguishingmedia	: Water spray, alcohol resistant foam, dry chemical, carbon dioxide, or appropriate foam.
5.2.	Special hazards arising from the su	bstance or mixture
Fire haza	ard	: Emits toxic fumes under fire conditions.
Explosio	n hazard	: Emits toxic fumes under fire conditions.
Reactivit	У	: No dangerous reactions known under normal conditions of use.
5.3.	Advice for firefighters	
Firefighti	ng instructions	: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Protectio	on during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures				
6.1.	. Personal precautions, protective equipment and emergency procedures			
General	measures	: Ventilate area. Evacuate area. Keep upwind. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).		
6.1.1.	For non-emergency personnel			
Protectiv	ve equipment	: Wear Personal Protective Equipment as described in Section 8.		
6.1.2.	For emergency responders			
Protectiv	ve equipment	: Wear suitable protective clothing, gloves, respirator, and eye or face protection. For further information refer to section 8: "Exposure controls/personal protection".		
6.2.	Environmental precautions			
Prevent	entry to sewers and public waters. Notify	authorities if liquid enters sewers or public waters. Avoid release to the environment.		
6.3.	Methods and material for containme	ent and cleaning up		
For cont	ainment	· Contain any spills with dikes or inert absorbents (e.g., sand or vermiculite) to prevent migration		

For containment	: Contain any spills with dikes or inert absorbents (e.g., sand or vermiculite) to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Soak up spills with inert absorbants, such as sand or vermiculite as soon as possible. Place in closed waste container for disposal. This material and its container must be disposed of in a safe way, and as per local, state, and federal legislation.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Precautions for safe handling	: Do not handle until all safety precautions have been read and understood. Wear recommended personal protective equipment. Wash hands and other exposed areas with mild soap and water after handling material, leaving the laboratory, before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

: Store in a -20°C freezer without a defrost cycle.



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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Glycerol	56-81-5	TWA	10 mg/m3	USA. OSHA – TABLE Z-1 Limits for Air Contaminants – 1910.1000
		TWA	10 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respir	atory Tract Irritation	
		TWA	5 mg/m3	USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminants
		TWA	15 mg/m3	USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminants

8.2. Exposure controls

Appropriate engineering controls

Personal protective equipment

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ensure adequate ventilation, especially in confined areas. Emergency safety shower and eye wash station should be available. Avoid prolonged or repeated exposure.
 Gloves. Protective goggles. Laboratory Coat.



Hand protection

- Eye protection Skin and body protection Respiratory protection
- : Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suitable gloves for this specific application can be recommended by the glove supplier. Suggested glove materials are: Neoprene, Nitrile.
- : Safety goggles should be worn when working with mixture. Avoid direct contact with eyes.
- : Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.
- : Use NIOSH/MSHA-approved dust/particulate respirator if exposure symptoms develop. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment. Do not breathe in vapour, mist, or dust.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and	l chei	nical properties
Physical state	:	Liquid
Color	:	No data available
Odor	:	No data available
Odor Threshold	:	No data available
рН	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Solubility in Water	:	No data available
Log Pow	:	No data available
Log Kow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available

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Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

None known. Hazardous polymerization does not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong oxidizing agents, strong bases.

10.6. Hazardous decomposition products

Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	No data available
Skin corrosion/irritation	:	No data available
Serious eye damage/irritation	:	No data available
Respiratory or skin sensitisation	:	No data available
Germ cell mutagenicity	:	No data available
Carcinogenicity	:	IARC – No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
		ACGIH – No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
		NTP – No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
		OSHA – No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	:	No data available
Specific target organ toxicity (single exposure)	:	No data available
Specific target organ toxicity (repeated exposure)	:	No data available
Aspiration hazard	:	No data available
Symptoms/injuries after inhalation	:	May cause upper respiratory irratation. May cause headaches.
Symptoms/injuries after skin contact	:	Direct contact with skin will cause skin irritation.
Symptoms/injuries after eye contact	:	Direct contact will cause eye irritation.
Symptoms/injuries after ingestion	:	Will cause gastrointestinal distress.
Additional Information	:	The chemical, physical, and toxicological properties have not been thoroughly investigated. Repeated or prolonged exposure may cause headache, vomitting, and nausea. May cause kidney irregularities (based on human evidence).

SECTION 12: Ecological information

12.1. Toxicity

No additional information available



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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations		
13.1. Waste treatment methods		
Waste treatment methods	: Obtain the consent of pollution control authorities before discharging to wastewater treatment plants. Product should not be discharged to surface waters without a NPDES permit.	
Waste disposal recommendations	: Dispose in a safe manner in accordance with local, state, and federal regulations. Avoid release to the environment.	
SECTION 14: Transport inform	ation	
In accordance with DOT		

Not hazardous for transport Additional information

: No supplementary information available.

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

SARA 302 Components

No chemicals in this solution are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards

Chronic Health Hazard

SARA 313

This materials does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.2. International regulations

None.

15.3. US State regulations

California Proposition 65

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm.

Massachusetts Right To Know Components Glycerol, CAS 56-81-5

New Jersey Right to Know Hazardous Substance List Glycerol, CAS 56-81-5

Pennsylvania Right to Know List Glycerol, CAS 56-81-5

SECTION 16: Other information

Indication of changes

: Revision B: Update branding.



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Revision date	: 11/10/2021
Otherinformation	: Author: Biosearch Technologies
NFPA health hazard	: 0 – Poses no health hazard, no precautions necessary and would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	: 1 – Materials that require considerable preheating, under all ambient temperature condtision, before ignition and combustion can occur. Flash point at or above 93.3°C.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.
HMIS III Rating	
Health	: 0
Flammability	: 1
Physical Hazard	: 0
Personal Protection	:

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with applicable regional, national and local laws and regulations.

LG

Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 11/10/2021 Version: B



1.1. Product identifier

Product name	:	10X CloneDirect Buffer
Product form	:	Mixture
Product code	:	F98185-5

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

: Laboratory chemical.

1.3. Details of the supplier of the safety data sheet

Lucigen Corp. Legal entity of LGC, Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

1.4. Emergency telephone number Emergency number

: 1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified.

2.2. Label elements

GHS-US labelling

No labeling applicable.

2.3. Other hazards

None.

2.4. Unknown acute toxicity (GHS-US)

No data available.

SECTION 3: Composition/information on ingredients

3.2. Mixture

Name	Product identifier	%
Tris Acetate, CAS # 6850-28-8 EC# 229-939-6 Chemical Formula: C ₄ H ₁₁ NO ₃ *CH ₃ COOH Molecular Weight: 181.19 g/mol Synonyms: TRISacetate salt, Tris(hydroxymethyl)aminomethaneacetate salt, [2-Hydroxy-1, 1-bis(hydroxymethyl)ethyl]ammonium acetate	Ingredient in product.	5.4
Magnesium acetate, CAS # 142-72-3 EC# 205-554-9 Chemical Formula: C₄H₀MgO₄ Molecular Weight: 142.39 g/mol Synonyms: Magnesium di(acetate)	Ingredient in product.	1.4%
$\begin{array}{l} \textbf{DL-Dithiothreitol, CAS \# 3483-12-3}\\ EC\# 222-468-7\\ Chemical Formula: C_4H_{10}O_2S_2\\ Molecular Weight: 154.25 g/mol\\ Synonyms: DTT, threo-1, 4-Dimercapto-2,3-butanediol,\\ Cleland's reagent, (R*,R*)-1,4-Dimercaptobutane-2,3-diol\\ \end{array}$	Ingredient in product.	1.5%



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SECTION 4: First aid measures

4.1. Description of first aid measures

IS
ot

4.3. Indication of any immediate medical attention and special treatment needed

No additional information.

5.1.	Extinguishing media	
Suitable	extinguishingmedia	: Water spray, carbon dioxide, dry chemical powder, alcohol-resistant foam, or appropriate foam
5.2.	Special hazards arising from	the substance or mixture
Fire haz	ard	: Emits toxic fumes under fire conditions (Carbon oxides, Nitrogen oxides, Sulphur oxides, Magnesium oxide).
Explosic	on hazard	: No data available.
Reactivi	ty	: Can react with oxidizing agents.
5.3.	Advice for firefighters	
Firefight	ing instructions	: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Protecti	on during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECT	ION 6: Accidental releas	emeasures
6.1.		tive equipment and emergency procedures
General	Imeasures	: Ventilate area. Evacuate area. Keep upwind. Spill should be handled by trained clean-up crew properly equipped with respiratory equipment and full chemical protective gear (see Section 8)
6.1.1.	For non-emergency personn	91
Protecti	veequipment	: Wear Personal Protective Equipment as described in Section 8.
6.1.2.	For emergency responders	
Protecti	ve equipment	: Wear suitable protective clothing, gloves, respirator, and eye or face protection. For further information refer to section 8: "Exposure controls/personal protection".
6.2.	Environmental precautions	
Prevent	entry to sewers and public water	s. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.
6.3.	Methods and material for cor	tainment and cleaning up
For cont	tainment	: Contain any spills with dikes or inert absorbents (e.g., sand or vermiculite) to prevent migration and entry into sewers or streams.
Method	s for cleaning up	: Soak up spills with inert absorbants, such as sand or vermiculite as soon as possible. Place in closed waste container for disposal. This material and its container must be disposed of in a safe way, and as per local, state, and federal legislation.

No additional information available



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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: Do not handle until all safety precautions have been read and understood. Wear recommended personal protective equipment. Wash hands and other exposed areas with mild soap and water after handling material, leaving the laboratory, before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions

: Store in a -20°C freezer without a defrost cycle.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Contains no substances with occupational exposure limits.

8.2. Exposure controls

Appropriate engineering controls

Personal protective equipment

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below re commended exposure limits. Ensure adequate ventilation, especially in confined areas. Emergency safety shower and eye wash station should be available. Avoid prolonged or repeated exposure.
 Gloves. Protective goggles. Laboratory Coat.



Hand protection

Eye protection

Skin and body protection

Respiratory protection

	Use gloves chemically resistant to this material when prolonged or repeated contact could
	occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suitable gloves
	for this specific application can be recommended by the glove supplier. Suggested glove
	materials are: Neoprene, Nitrile.

- : Safety goggles should be worn when working with mixture. Avoid direct contact with eyes.
- : Wear long sleeves, and chemically impervious PPE/coveralls to minimize bodily exposure.
- : Use NIOSH/MSHA-approved dust/particulate respirator if exposure symptoms develop. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment. Do not breathe in vapour, mist, or dust.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and che	
Physical state :	Liquid
Color	No data available
Odor	No data available
Odor Threshold :	No data available
pH :	No data available
Melting point :	No data available
Freezing point (50% aquesous solution)	No data available
Boiling point :	No data available
Flash point :	No data available
Relative evaporation rate	No data available
Flammability (solid, gas)	No data available
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	No data available
Solubility in Water :	No data available
Log Pow :	No data available
Log Kow :	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	No data available

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- Explosive properties
- Oxidising properties

Explosive limits

- : No data available : No data available
- : No data available

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

Strong oxidizing agents, bases, reducing agents, acids, alkali metals.

10.6. Hazardous decomposition products

Carbon oxides, Nitrogen oxides, Sulphur oxides, Magnesium oxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	No data available
Skin corrosion/irritation	:	No data available
Serious eye damage/irritation	:	No data available
Respiratory or skin sensitisation	:	No data available
Germ cell mutagenicity	:	No data available
Carcinogenicity	:	IARC – No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
		ACGIH – No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
		NTP – No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
		OSHA – No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity	:	No data available
Specific target organ toxicity (single exposure)	:	No data available
Specific target organ toxicity (repeated exposure)	:	No data available
Aspiration hazard	:	No data available
Symptoms/injuries after inhalation	:	May cause irritation to respiratory tract.
Symptoms/injuries after skin contact	:	May cause mild irritation to skin.
Symptoms/injuries after eye contact	:	May cause irritation, redness, and pain.
Symptoms/injuries after ingestion	:	May cause gastrointestinal distress, nausea, and diarrhea.
Additional Information	:	RTECS : Not available. May cause central nervous system depression, vomiting, diarrhoea, dehydration, congestion in internal organs, liver irregularities (human evidence), and stomach irregularities (human evidence). To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available



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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

: Obtain the consent of pollution control authorities before discharging to wastewater treatment plants. Product should not be discharged to surface waters without a NPDES permit.

Waste disposal recommendations

 Dispose in a safe manner in accordance with local, state, and federal regulations. Avoid release to the environment.

SECTION 14: Transport information

DOT

Not dangerous goods

IMDG

Not dangerous goods

ΙΑΤΑ

Not dangerous goods

SECTION 15: Regulatory information

15.1. US Federal regulations

SARA 304 Extremely Hazardous Substances Reportable Quantity

This product does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.2. International regulations.

None.

15.3. US State regulations

California Proposition 65

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm.

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

New Jersey Right to Know Hazardous Substance List

[2-Hydroxy-1,1-bis(hydroxymethyl)ethyl]ammonium acetate, CAS 6850-28-8 Magnesium di(acetate), CAS 142-72-3 (R*,R*)-1,4-Dimercaptobutane-2,3-diol, CAS 3483-12-3

Pennsylvania Right to Know List

[2-Hydroxy-1,1-bis(hydroxymethyl)ethyl]ammonium acetate, CAS 6850-28-8 Magnesium di(acetate), CAS 142-72-3 (R*,R*)-1,4-Dimercaptobutane-2,3-diol, CAS 3483-12-3

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SECTION 16: Other information			
Indication of changes	: Revision B: Update branding.		
Revision date	: 11/10/2021		
Otherinformation	: Author: Biosearch Technologies		
NFPA health hazard	: 1 – Exposure would cause irritation with only minor residual injury.		
NFPA fire hazard	: 0 – Material that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone and sand.		
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.		
HMIS III Rating			
Health	: 1		
Flammability	: 0		
Physical Hazard	: 0		
Personal Protection	:		

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relation ship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with applicable regional, national and local laws and regulations.

LG

Safetv Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 10/18/2021 Version: B



SECTION 1: Identification of the substance/mixture and of the company/undertaking

: Laboratory Chemicals.

1.1. Product identifier

Product name	: Positive Control Insert DNA Lambda Pmel Smal
Product form	: Mixture
Product code	: F92368-1

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

1.3. Details of the supplier of the safety data sheet

Lucigen Corp. Legal entity of LGC, Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

1.4. Emergency telephone number

Emergency number

: 1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not a hazardous substance or mixture.

2.2. Label elements

GHS-US labelling

Not a hazardous substance or mixture.

2.3. Other hazards

No additional information available.

2.4. Unknown acute toxicity (GHS-US)

No data available.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Non-hazardous mixture

SECTION 4: First aid measures

4.1. Description of first aid measures			
First-aid measures general	 If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person. 		
First-aid measures after inhalation	: IF INHALED: Remove to fresh air and keep at rest in a comfortable position for breathing. If not breathing, give artificial respiration. Consult a physician.		
First-aid measures after skin contact	: IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with tepid water for at least 15 minutes. If symptoms continue, consult a physician.		
First-aid measures after eye contact	: IF IN EYES: Immediately flush with tepid water for at least 15 minutes. Remove contact lenses if present and can easy to do so. Continue rinsing. If symptoms continue, consult a physician.		
First-aid measures after ingestion	: IF SWALLOWED: Rinse mouth thoroughly. Do not induce vomiting. Consult a physician if symptoms persist. Do not give anything by mouth to an unconscious person.		
4.2. Most important symptoms and effects, both acute and delayed			
Symptoms/injuries	: Not expected to present a significant acute hazard under anticipated conditions of normal use.		
Symptoms/injuries after inhalation	: May cause upper respiratory irratation.		
Symptoms/injuries after skin contact	: May cause skin irritation.		



Symptoms/injuries after eye contact	: Direct contact with the eyes is likely to be irritating.
Symptoms/injuries after ingestion	: May cause gastrointestinal irritation.
4.3. Indication of any immediate me	dical attention and special treatment needed
No additional information available.	
SECTION 5: Firefighting measur	es
5.1. Extinguishing media	
Suitable extinguishing media	: Incase of fire, use water, dry chemical, chemical foam, or alcohol-resistance foam. Use agents most appropriate to extinguish the fire.
5.2. Special hazards arising from th	e substance or mixture
Fire hazard	: Product is not flammable.
Explosion hazard	: Product is not explosive.
Reactivity	: No dangerous reactions known under normal conditions of use.
5.3. Advice for firefighters	
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. In the event of fire and/or explosion, do not breathe fumes. Do not dispose of fire fighting water in the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release	neasures
	/e equipment and emergency procedures
General measures	: Ventilate area. Evacuate area. Keep upwind. Spill should be handled by trained clean-up crew properly equipped with respiratory equipment and full chemical protective gear (see Section 8)
6.1.1. For non-emergency personnel	
Protective equipment	: Wear Protective equipment as described in Section 8.
6.1.2. For emergency responders	
Protective equipment	: Wear suitable protective clothing, gloves and eye or face protection. For further information refer to section 8: "Exposure controls/personal protection".
6.2. Environmental precautions	
Prevent entry to sewers and public waters.	Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.
6.3. Methods and material for conta	inment and cleaning up
For containment	: Contain any spills with dikes or inert absorbents (e.g., sand or vermiculite) to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Soak up spills with inert absorbants, such as vermiculite and sand. This material and its container must be disposed of in a safe way, and as per local, state, and federal legislation.
6.4. Reference to other sections	
No additional information available	
SECTION 7: Handling and stora	ge
7.1. Precautions for safe handling	
Precautions for safe handling	: Do not handle until all safety precautions have been read and understood. Wear recommender personal protective equipment. Wash hands and other exposed areas with mild soap and wate after working with mixture, before leaving the laboratory, before eating, drinking or smoking any when leaving work. Avoid ingestion and inhalation. Keep container tightly closed.
7.2. Conditions for safe storage, inc	luding any incompatibilities

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.



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8.2. Exposure controls	
Appropriate engineering controls	: Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ensure adequate ventilation, especially in confine d areas. Emergency safety shower and eye wash should be available.
Personal protective equipment	: Gloves. Protective goggles.
Hand protection	: Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suitable gloves for this specific application can be recommended by the glove supplier.
Eye protection	: Use eye protection suitable to the environment. Avoid direct contact with eyes.
Skin and body protection	: Wear long sleeves, and chemically impervious PPE to minimize bodily exposure.
Respiratory protection	: Use NIOSH-approved dust/particulate respirator as needed. Where vapor, mist, or dust exceed

PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties			
Physical state	: Liquid containing dissolved material		
Color	: Colorless		
Odor	: No data available		
Odor Threshold	: No data available		
рН	: ~7		
Melting point	: No data available		
Freezing point	: No data available		
Boiling point	: No data available		
Flash point	: No data available		
Relative evaporation rate	: No data available		
Flammability (solid, gas)	: No data available		
Vapour pressure	: No data available		
Relative vapour density at 20 °C	: No data available		
Relative density	: No data available		
Solubility	: No data available		
Log Pow	: No data available		
Log Kow	: No data available		
Auto-ignition temperature	: No data available		
Decomposition temperature	: No data available		
Viscosity, kinematic	: No data available		
Viscosity, dynamic	: No data available		
Explosive properties	: No data available		
Oxidising properties	: No data available		
Explosive limits	: No data available		
9.2. Other information			

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

None known.



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10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not available
Skin corrosion/irritation	: Not available
Serious eye damage/irritation	: Not available
Respiratory or skin sensitisation	: Not available
Germ cell mutagenicity	: Not available
Carcinogenicity	: Not available
Reproductive toxicity	: Not available
Specific target organ toxicity (single exposure)	: Not available
Specific target organ toxicity (repeated exposure)	: Not available
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May cause upper respiratory irratation.
Symptoms/injuries after skin contact	: May cause skin irritation.
Symptoms/injuries after eye contact	: Direct contact with the eyes is likely to be irritating.
Symptoms/injuries after ingestion	: May cause gastrointestinal irritation.

SECT	ION 12: Ecological information		
12.1.	Toxicity		
No add	itional information available.		
12.2.	Persistence and degradability		
No add	itional information available.		
12.3.	Bioaccumulative potential		
No add	itional information available.		
12.4.	Mobility in soil		
No add	itional information available.		
12.5.	Other adverse effects		
No add	itional information available.		
SECT	ION 13: Disposal considerati		
13.1.	Waste treatment methods		
Waste t	treatment methods		n control authorities before discharging to wastewater treatment discharged to surface waters without a NPDES permit.
Waste	disposal recommendations	oose in a safe manner in a ase to the environment.	ccordance with local, state, and federal regulations. Avoid

SECTION 14: Transport information

In accordance with DOT

Not hazardous for transport Additional information

Other information

: No supplementary information available.

Transport by sea

No additional information available

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Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

SARA 304 Extremely Hazardous Substances Reportable Quantity

This product does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

No SARA Hazards

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.2. International regulations

No additional information available.

15.3. US State regulations

California Proposition 65

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

This mixture not listed on the following: U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other informa	tion
Indication of changes	: Revision B: Update branding.
Revision date	: 10/18/2021
Other information	: Author: Biosearch Technologies.
NFPA health hazard	: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	: 0 - Materials that will not burn.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.
HMIS III Rating	
Health	: 0
Elemente e la litta a	

Health	:	0
Flammability	:	0
Physical	:	0
Personal Protection	:	

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relation ship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with applicable regional, national and local laws and regulations.



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SECTION 1: Identification of the substance/mixture and of the company/undertaking

: Laboratory Chemicals.

1.1. Product identifier

Product name	:	SL1 Primer
Product form	:	Mixture
Product code	:	F91108-1

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

1.3. Details of the supplier of the safety data sheet

Lucigen Corp. Legal entity of LGC, Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

1.4. Emergency telephone number

Emergency number

: 1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not a hazardous substance or mixture.

2.2. Label elements

GHS-US labelling

Not a hazardous substance or mixture.

2.3. Other hazards

No additional information available.

2.4. Unknown acute toxicity (GHS-US)

No data available.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Non-hazardous mixture

SECTION 4: First aid measures

4.1. Description of first aid measures				
First-aid measures general	: If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.			
First-aid measures after inhalation	: IF INHALED: Remove to fresh air and keep at rest in a comfortable position for breathing. If not breathing, give artificial respiration. Consult a physician.			
First-aid measures after skin contact	: IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with tepid water for at least 15 minutes. If symptoms continue, consult a physician.			
First-aid measures after eye contact	: IF IN EYES: Immediately flush with tepid water for at least 15 minutes. Remove contact lenses if present and can easy to do so. Continue rinsing. If symptoms continue, consult a physician.			
First-aid measures after ingestion	: IF SWALLOWED: Rinse mouth thoroughly. Do not induce vomiting. Consult a physician if symptoms persist. Do not give anything by mouth to an unconscious person.			
4.2. Most important symptoms and effects, both acute and delayed				
Symptoms/injuries	: Not expected to present a significant acute hazard under anticipated conditions of normal use.			
Symptoms/injuries after inhalation	: May cause upper respiratory irratation.			
Symptoms/injuries after skin contact	: May cause skin irritation.			



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Symptoms/injuries after eye contact	: Direct contact with the eyes is likely to be irritating.
Symptoms/injuries after ingestion	: May cause gastrointestinal irritation.
4.3. Indication of any immediate me	edical attention and special treatment needed
No additional information available.	
SECTION 5: Firefighting measur	es
5.1. Extinguishing media	
Suitable extinguishing media	: Incase of fire, use water, dry chemical, chemical foam, or alcohol-resistance foam. Use agents most appropriate to extinguish the fire.
5.2. Special hazards arising from th	e substance or mixture
Fire hazard	: Product is not flammable.
Explosion hazard	: Product is not explosive.
Reactivity	: No dangerous reactions known under normal conditions of use.
5.3. Advice for firefighters	
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. In the event of fire and/or explosion, do not breathe fumes. Do not dispose of fire fighting water in the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release	measures
6.1. Personal precautions, protectiv	ve equipment and emergency procedures
Generalmeasures	: Ventilate area. Evacuate area. Keep upwind. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).
6.1.1. For non-emergency personnel	
Protective equipment	: Wear Protective equipment as described in Section 8.
6.1.2. For emergency responders	
Protective equipment	: Wear suitable protective clothing, gloves and eye or face protection. For further information refer to section 8: "Exposure controls/personal protection".
6.2. Environmental precautions	
Prevent entry to sewers and public waters.	Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.
6.3. Methods and material for conta	inment and cleaning up
For containment	: Contain any spills with dikes or inert absorbents (e.g., sand or vermiculite) to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Soak up spills with inert absorbants, such as vermiculite and sand. This material and its container must be disposed of in a safe way, and as per local, state, and federal legislation.
6.4. Reference to other sections	
No additional information available	
SECTION 7: Handling and stora	ge
7.1. Precautions for safe handling	
Precautions for safe handling	: Do not handle until all safety precautions have been read and understood. Wear recommended personal protective equipment. Wash hands and other exposed areas with mild soap and water after working with mixture, before leaving the laboratory, before eating, drinking or smoking and when leaving work. Avoid ingestion and inhalation. Keep container tightly closed.
7.2. Conditions for safe storage, inc	cluding any incompatibilities
Storage conditions	Store in at either -20°C or -70°C. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

SL1 Primer.

Components with workplace control parameters

Contains no substances with occupational exposure limit values.



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8.2.	Exposure controls	
Approp	riate engineering controls	: Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ensure adequate ventilation, especially in confined areas. Emergency safety shower and eye wash should be available.
Persona	al protective equipment	: Gloves. Protective goggles.
Hand pi	rotection	: Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suitable gloves for this specific application can be recommended by the glove supplier.
Eye pro	tection	: Use eye protection suitable to the environment. Avoid direct contact with eyes.
Skin an	d body protection	: Wear long sleeves, and chemically impervious PPE to minimize bodily exposure.
Respira	tory protection	: Use NIOSH-approved dust/particulate respirator as needed. Where vapor, mist, or dust exceed PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties			
Physical state	: Liquid containing dissolved material		
Color	: Colorless		
Odor	: No data available		
Odor Threshold	: No data available		
рН	: ~7		
Melting point	: No data available		
Freezing point	: No data available		
Boiling point	: No data available		
Flash point	: No data available		
Relative evaporation rate	: No data available		
Flammability (solid, gas)	: No data available		
Vapour pressure	: No data available		
Relative vapour density at 20 °C	: No data available		
Relative density	: No data available		
Solubility	: No data available		
Log Pow	: No data available		
Log Kow	: No data available		
Auto-ignition temperature	: No data available		
Decomposition temperature	: No data available		
Viscosity, kinematic	: No data available		
Viscosity, dynamic	: No data available		
Explosive properties	: No data available		
Oxidising properties	: No data available		
Explosive limits	: No data available		
9.2. Other information			

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under use and storage conditions as recommended in section 7.

10.3. Possibility of hazardous reactions

None known.



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10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not available
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity	 Not available Not available Not available Not available Not available Not available
Reproductive toxicity Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated exposure)	Not availableNot availableNot available
Aspiration hazard Symptoms/injuries after inhalation Symptoms/injuries after skin contact Symptoms/injuries after eye contact Symptoms/injuries after ingestion	 Not classified May cause upper respiratory irratation. May cause skin irritation. Direct contact with the eyes is likely to be irritating. May cause gastrointestinal irritation.

SECT	ION 12: Ecological informati	on
12.1.	Toxicity	
No add	itional information available.	
12.2.	Persistence and degradability	
No add	itional information available.	
12.3.	Bioaccumulative potential	
No add	itional information available.	
12.4. Mobility in soil		
No add	itional information available.	
12.5.	Other adverse effects	
No add	itional information available.	
SECT	ION 13: Disposal considerat	ons
13.1.	Waste treatment methods	
Waste	treatment methods	: Obtain the consent of pollution control authorities before discharging to wastewater treatment plants. Product should not be discharged to surface waters without a NPDES permit.
Waste	disposal recommendations	: Dispose in a safe manner in accordance with local, state, and federal regulations. Avoid release to the environment.

SECTION 14: Transport information In accordance with DOT Not hazardous for transport Additional information Other information : No supplementary information available. Transport by sea No additional information available Page 4 of 5

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Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

SARA 304 Extremely Hazardous Substances Reportable Quantity

This product does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

No SARA Hazards

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.2. International regulations

No additional information available.

15.3. US State regulations

California Proposition 65

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

This mixture not listed on the following:	
U.S Massachusetts - Right To Know List	
U.S New Jersey - Right to Know Hazardous Substance List	
U.S Pennsylvania - RTK (Right to Know) List	
SECTION 16: Other information	

Indication of changes Revision date	: Revision B: Update branding. : 10/15/2021
Otherinformation	: Author: Biosearch Technologies.
NFPA health hazard	: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	: 0 - Materials that will not burn.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.
HMIS III Rating	
Health	: 0
Elemme hilitu	

nealth	•	U
Flammability	:	0
Physical	:	0
Personal Protection	:	

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relation ship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with applicable regional, national and local laws and regulations.



Safety Data Sheet

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Revision date: 10/15/2021 Version: B



SECTION 1: Identification of the substance/mixture and of the company/undertaking

: Laboratory Chemicals.

1.1. Product identifier

Product name	:	NZ RevC Primer
Product form	:	Mixture
Product code	:	F91433-1

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

1.3. Details of the supplier of the safety data sheet

Lucigen Corp. Legal entity of LGC, Biosearch Technologies 2905 Parmenter Street Middleton, WI 53562 U.S.A. Phone: (608) 831-9011 Fax: (608) 831-9012 E-mail: techsupport@LGCGroup.com

1.4. **Emergency telephone number**

Emergency number

: 1-888-575-9695 (Biosearch Technologies: Monday-Friday, 8:00AM-5:00PM)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not a hazardous substance or mixture.

2.2 Label elements

GHS-US labelling

Not a hazardous substance or mixture.

Other hazards 2.3.

No additional information available.

Unknown acute toxicity (GHS-US) 24

No data available.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Non-hazardous mixture

SECTION 4: First aid measures

4.1. Description of first aid measures		
First-aid measures general	: If exposed or concerned, get medical attention/advice. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use. Never give anything to an unconscious person.	
First-aid measures after inhalation	: IF INHALED: Remove to fresh air and keep at rest in a comfortable position for breathing. If not breathing, give artificial respiration. Consult a physician.	
First-aid measures after skin contact	: IF ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with tepid water for at least 15 minutes. If symptoms continue, consult a physician.	
First-aid measures after eye contact	: IF IN EYES: Immediately flush with tepid water for at least 15 minutes. Remove contact lenses if present and can easy to do so. Continuerinsing. If symptoms continue, consult a physician.	
First-aid measures after ingestion	: IF SWALLOWED: Rinse mouth thoroughly. Do not induce vomiting. Consult a physician if symptoms persist. Do not give anything by mouth to an unconscious person.	
4.2. Most important symptoms and effects, both acute and delayed		
Symptoms/injuries	: Not expected to present a significant acute hazard under anticipated conditions of normal use.	
Symptoms/injuries after inhalation	: May cause upper respiratory irratation.	
Symptoms/injuries after skin contact	: May cause skin irritation.	



Symptoms/injuries after eye contact	: Direct contact with the eyes is likely to be irritating.
Symptoms/injuries after ingestion	: May cause gastrointestinal irritation.
	edical attention and special treatment needed
No additional information available.	
SECTION 5: Firefighting measur	res
5.1. Extinguishing media	
Suitable extinguishing media	: Incase of fire, use water, dry chemical, chemical foam, or alcohol-resistance foam. Use agents most appropriate to extinguish the fire.
5.2. Special hazards arising from th	ne substance or mixture
Fire hazard	: Product is not flammable.
Explosion hazard	: Product is not explosive.
Reactivity	: No dangerous reactions known under normal conditions of use.
5.3. Advice for firefighters	
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. In the event of fire and/or explosion, do not breathe fumes. Do not dispose of fire fighting water in the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release	measures
	ve equipment and emergency procedures
General measures	 Ventilate area. Evacuate area. Keep upwind. Spill should be handled by trained clean-up crew properly equipped with respiratory equipment and full chemical protective gear (see Section 8)
6.1.1. For non-emergency personnel	
Protective equipment	: Wear Protective equipment as described in Section 8.
6.1.2. For emergency responders	
Protective equipment	: Wear suitable protective clothing, gloves and eye or face protection. For further information refer to section 8: "Exposure controls/personal protection".
6.2. Environmental precautions	
Prevent entry to sewers and public waters.	Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.
6.3. Methods and material for conta	inment and cleaning up
For containment	: Contain any spills with dikes or inert absorbents (e.g., sand or vermiculite) to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Soak up spills with inert absorbants, such as vermiculite and sand. This material and its container must be disposed of in a safe way, and as per local, state, and federal legislation.
0.4 Defense of the th	
6.4. Reference to other sections	
No additional information available	ge
No additional information available SECTION 7: Handling and stora	ge
No additional information available SECTION 7: Handling and stora 7.1. Precautions for safe handling	ge : Do not handle until all safety precautions have been read and understood. Wear recommender personal protective equipment. Wash hands and other exposed areas with mild soap and water after working with mixture, before leaving the laboratory, before eating, drinking or smoking ar when leaving work. Avoid ingestion and inhalation. Keep container tightly closed.
No additional information available SECTION 7: Handling and store	: Do not handle until all safety precautions have been read and understood. Wear recommender personal protective equipment. Wash hands and other exposed areas with mild soap and water after working with mixture, before leaving the laboratory, before eating, drinking or smoking ar when leaving work. Avoid ingestion and inhalation. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

NZ RevC Primer.

Components with workplace control parameters

Contains no substances with occupational exposure limit values.



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8.2. Exposur	e controls
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Appropriate engineering controls	Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ensure adequate ventilation, especially in confined areas. Emergency safety shower and eye wash should be available.
Personal protective equipment	: Gloves. Protective goggles.
Hand protection	: Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suitable gloves for this specific application can be recommended by the glove supplier.
Eye protection	: Use eye protection suitable to the environment. Avoid direct contact with eyes.
Skin and body protection	: Wear long sleeves, and chemically impervious PPE to minimize bodily exposure.
Respiratory protection	: Use NIOSH-approved dust/particulate respirator as needed. Where vapor, mist, or dust exceed

PELs or other applicable OELs, use NIOSH-approved respiratory protective equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties		
Physical state	: Liquid containing dissolved material	
Color	: Colorless	
Odor	: No data available	
Odor Threshold	: No data available	
рН	: ~7	
Melting point	: No data available	
Freezing point	: No data available	
Boiling point	: No data available	
Flash point	: No data available	
Relative evaporation rate	: No data available	
Flammability (solid, gas)	: No data available	
Vapour pressure	: No data available	
Relative vapour density at 20 °C	: No data available	
Relative density	: No data available	
Solubility	: No data available	
Log Pow	: No data available	
Log Kow	: No data available	
Auto-ignition temperature	: No data available	
Decomposition temperature	: No data available	
Viscosity, kinematic	: No data available	
Viscosity, dynamic	: No data available	
Explosive properties	: No data available	
Oxidising properties	: No data available	
Explosive limits	: No data available	
9.2. Other information		

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. **Chemical stability**

Stable under use and storage conditions as recommended in section 7.

Possibility of hazardous reactions 10.3.

None known.



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10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not available
Skin corrosion/irritation Serious eye damage/irritation Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity	 Not available Not available Not available Not available Not available Not available
Reproductive toxicity Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated exposure)	: Not available : Not available : Not available
Aspiration hazard Symptoms/injuries after inhalation Symptoms/injuries after skin contact Symptoms/injuries after eye contact Symptoms/injuries after ingestion	 Not classified May cause upper respiratory irratation. May cause skin irritation. Direct contact with the eyes is likely to be irritating. May cause gastrointestinal irritation.

SECT	ION 12: Ecological informa	tion				
12.1.	Toxicity					
No add	tional information available.					
12.2.	Persistence and degradability					
No add	itional information available.					
12.3.	Bioaccumulative potential					
No additional information available.						
12.4.	Mobility in soil					
No add	tional information available.					
12.5.	Other adverse effects					
No add	tional information available.					
SECT	ION 13: Disposal considera	ations				
13.1.	Waste treatment methods					
Waste treatment methods		: Obtain the consent of pollution control authorities before discharging to wastewater treatment plants. Product should not be discharged to surface waters without a NPDES permit.				
Waste disposal recommendations		: Dispose in a safe manner in accordance with local, state, and federal regulations. Avoid release to the environment.				

SECTION 14: Transport information

In accordance with DOT Not hazardous for transport

Additional information

Other information

: No supplementary information available.

Transport by sea

No additional information available

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Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

SARA 304 Extremely Hazardous Substances Reportable Quantity

This product does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

No SARA Hazards

SARA 302

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

15.2. International regulations

No additional information available.

15.3. US State regulations

California Proposition 65

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

This mixture not listed on the following:				
U.S Massachusetts - Right To Know List				
U.S New Jersey - Right to Know Hazardous Substance List				
U.S Pennsylvania - RTK (Right to Know) List				
SECTION 16: Other information				

Indication of changes	: Revision B: Update branding.
Revision date	: 10/15/2021
Other information	: Author: Biosearch Technologies.
NFPA health hazard	: 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	: 0 - Materials that will not burn.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.
HMIS III Rating	
Health	: 0
Flammability	: 0

Personal Protection	:	
This information is disclosed to the	ne best of Biosearch Technologie	

: 0

This information is disclosed to the best of Biosearch Technologies' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with applicable regional, national and local laws and regulations.

Physical

